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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/608,589	06/27/2003	Torsten Niederdrank	P03,0228	8450
26574	7590	05/26/2005	EXAMINER	
SCHIFF HARDIN, LLP PATENT DEPARTMENT 6600 SEARS TOWER CHICAGO, IL 60606-6473			ENSEY, BRIAN	
			ART UNIT	PAPER NUMBER
			2643	

DATE MAILED: 05/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/608,589		NIEDERDRANK, TORSTEN	
	Examiner		Art Unit	
	Brian Ensey		2643	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arndt et al. U.S. Patent No. 5,204,917.

Regarding claim 1, Arndt discloses a modular hearing aid device, comprising: a microphone module that comprises a module housing and at least one microphone; a hearing aid device module that comprises a hearing aid device module housing and a slot for at least one microphone; wherein the microphone module housing supplements the hearing aid device module housing to form a housing of the hearing aid device having a uniform effect, the microphone module and the hearing aid device module being detachably connectable (See Figs. 1 and 10 and col. 6, lines 20-34). Arndt does not expressly disclose the hearing aid device module houses an additional microphone module. However, directional hearing aids are well known in the art and Arndt teaches the additional slot contains connections for a separate audio input to the hearing aid (See col. 6, lines 28-34). It would have been obvious to one of ordinary skill in the art at the time of the invention to provide an additional microphone in the slot of Arndt for improved directional reception.

Regarding claim 11, Arndt further discloses the microphone module comprises an electronic interface to the hearing aid device module (See col. 5, lines 7-30).

Claims 2- 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arndt as applied to claim 1 above, and further in view of Klope et al. U.S. Patent Application Publication No.2003/0070868.

Regarding claims 2 and 4, Arndt does not expressly disclose an attenuation-damped connection comprising a damping material for connecting the microphone module and the hearing aid device module. However, Klope disclose an attenuation damping material for an attenuation-damped connection of a microphone in a hearing aid (See Fig. 3 and paragraph 0023). It would have been obvious to one of ordinary skill in the art at the time of the invention to provide a damping layer to prevent unwanted vibration (See paragraph 0001).

Regarding claim 3, Arndt discloses a modular hearing aid device, comprising: a microphone module that comprises a module housing and at least one microphone; a hearing aid device module that comprises a hearing aid device module housing and a slot for at least one microphone; wherein the microphone module housing supplements the hearing aid device module housing to form a housing of the hearing aid device having a uniform effect, the microphone module and the hearing aid device module being detachably connectable (See Figs. 1 and 10 and col. 6, lines 20-34). Arndt does not expressly disclose the hearing aid device module houses an additional microphone module. However, directional hearing aids are well known in the art and Arndt teaches the additional slot contains connections for a separate audio input to the hearing aid (See col. 6, lines 28-34). It would have been obvious to one of ordinary skill in the art at the time of the invention to provide an additional microphone in the slot of Arndt for improved directional reception. Further, Arndt does not expressly disclose an attenuation-damped connection for connecting the microphone module and the hearing aid

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device module wherein the attenuation damped connection is arranged at at least one oscillatory node of characteristic oscillations of the hearing aid device module housing. However, Klope disclose an attenuation damping material for an attenuation-damped connection of a microphone in a hearing aid (See Fig. 3 and paragraph 0023). It would have been obvious to one of ordinary skill in the art at the time of the invention to provide a damping layer to prevent unwanted vibration (See paragraph 0001).

Claims 5-8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arndt as applied to claim 1 above, and further in view of Killion U.S. Patent No. 5,878,147.

Regarding claim 5, Arndt does not expressly disclose the microphone of the microphone module is fashioned as directional microphone. However, Killion teaches a modular directional microphone (See Figs. 1-4 and col. 6, lines 32-38). It would have been obvious to one of ordinary skill in the art at the time of the invention to provide a directional microphone assembly in the expansion slot of Arndt for improved directional reception.

Regarding claims 6 and 7, Arndt does not expressly disclose the microphone module comprises at least two microphones to form a directional microphone system. Multiple microphone modules in a single directional microphone are well known in the art and Killion teaches a modular directional microphone comprising two microphone modules forming a directional microphone system (See Fig. 9 and col. 8, line 61 to col. 9, line 16). It would have been obvious to one of ordinary skill in the art at the time of the invention to provide two microphones in a directional microphone assembly for improved directional response and reliability.

Regarding claim 8, Arndt does not expressly disclose the microphone module is configured to be simultaneously employed with the microphone of the hearing aid device module. However, the simultaneous use of multiple microphones for improved directional receiving is well known in the art and Killion teaches the use of multiple microphone inputs for directional reception. It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the installed microphone module and hearing aid microphone for improved directional receiving.

Regarding claim 10, Arndt does not expressly disclose the hearing aid device module is configured to accept various microphone modules that respectively comprise different acoustic and/or electronic properties. However, Arndt teaches a separate audio input for the hearing aid. Many various microphones are well-known in the art including non-directional, directional and omni-directional microphones. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide any one of various microphones for the hearing aid module for a variety of listening situations.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Arndt as applied to claim 1 above, and further in view of Uvacek U.S. Patent No. 6,154,546.

Regarding claim 9, Arndt discloses a modular hearing aid device, comprising: a microphone module that comprises a module housing and at least one microphone; a hearing aid device module that comprises a hearing aid device module housing and a slot for at least one microphone; wherein the microphone module housing supplements the hearing aid device module housing to form a housing of the hearing aid device having a uniform effect, the microphone module and the hearing aid device module being detachably connectable (See Figs.

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1 and 10 and col. 6, lines 20-34). Arndt does not expressly disclose the hearing aid device module houses an additional microphone module. However, directional hearing aids are well known in the art and Arndt teaches the additional slot contains connections for a separate audio input to the hearing aid (See col. 6, lines 28-34). It would have been obvious to one of ordinary skill in the art at the time of the invention to provide an additional microphone in the slot of Arndt for improved directional reception. Further, Arndt does not expressly disclose the modular hearing aid device is configured such that the microphone of the hearing aid module is deactivated when the microphone module is connected to the hearing aid module. However, Uvacek teaches a modular microphone module for connection to a hearing aid wherein a switching scheme is employed to selectively activate one microphone while deactivating the other microphone (See col. 6, lines 48-60). It would have been obvious to one of ordinary skill in the art at the time of the invention to select individual microphones for varying the input dynamic range of the hearing device (See col. 6, lines 48-60).

Response to Arguments

Applicant's arguments with respect to claims 1-11 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Ensey whose telephone number is 571-272-7496. The examiner can normally be reached on Monday - Friday 6:30 AM - 3:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis Kuntz can be reached on 571-272-7499. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

Or faxed to:

(703) 872-9306, for formal communications intended for entry and for informal or draft communications, please label "PROPOSED" or "DRAFT".

Hand-delivered responses should be brought to: Customer Service Window, Randolph Building, 401 Dulany Street, Arlington, VA 22314

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BKE

May 23, 2005


CURTIS KUNTZ
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